

CHARIESTERUS AND ITS NEOTROPICAL RELATIVES (COREIDÆ HETEROPTERA).

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The Squash-bug family contains an unusually large proportion of insects of bizarre form and possessing strange structures. Expanded or curved tibiæ, swollen and spinose femors, and flattened or clavate antennal joints seem to be the rule rather than the exception.

Among the more modest of the peculiar species are those of the tribe Chariesterini, a group whose members possess a flattened spatulate expansion of the third antennal segment and obliquely truncate, usually spinose, antenniferous tubercles. *Chariesterus antennator*, the most northern member of the tribe, is well known from New Jersey and Iowa to the Gulf of Mexico. A new species from California is described below, whose peculiarly shaped pronotum makes it one of the most remarkable of the Coreidæ.

The tribe is confined to the western hemisphere and includes three genera: Plapigus, Staluptus, and Chariesterus.

Plapigus now contains seven or eight described species, all South American except *circumcinctus* Stal from Mexico. This is a black form, with margins of pronotum, corium, and abdomen flavescens, a distinct callosity behind the eye, tibiæ with testaceous annulus, and expansion of third antennal segment longer than broad. The internal angle of each antenniferous tubercle is acute, and the first segment of the antennæ subclavate; the pronotal margins are entire, and the humeri each armed with a single long slender spine.

Staluptus marginalis Burmeister, according to the original description, is black, with unarmed posterior femora, which are fulvous at base, scarcely dilated third antennal segment, and brown venter and femora. It was described from Mexico.

The species of *Chariesterus*, seven in number, are more widely distributed than other members of the tribe, ranging throughout both continents. In this genus the first antennal segment is parallel-sided, though sometimes slightly broader

toward the tip. The callosity behind the eye, instead of being wanting, as Stal states, is merely usually smooth without acute points, although a few specimens of *C. antennator* from Kansas and Nebraska are at hand in which this tubercle is distinctly muricate.

The following synopsis is based on specimens in the collection of Dr. E. D. Ball, Mr. William J. Gerhard, of Chicago; Mr. H. G. Barber, Mr. Carl J. Drake, the Wisconsin Agricultural Experiment Station, and the Milwaukee Museum, except for *C. armatus* and *C. albiventris*, for whose positions reliance was placed on descriptions. The distribution of each species is indicated in the synopsis for the sake of brevity.

KEY TO THE SPECIES OF *Chariesterus*.

- a. Antennæ dilated equally on both sides of third segment.
 - b. Dilation of third antennal segment only three-tenths as wide as long; legs and antennæ ferrugineous; size 9 x 1.2 mm. (Antilles).
gracilicornis Stal.
 - bb. Dilation of third antennal segment at least four-tenths as wide as segment is long; legs and antennæ black; body above brown, below albo-farinaceous; length 11 mm. (Texas and Mexico).
albiventris Burm.
- aa. Antennæ with third segment more angularly dilated on lower side; length over 10 mm.
 - b. Lateral margins of pronotum armed with distinct tubercles in front of humeri; first antennal segment armed with distinct acute tubercles, larger near base.
 - c. Pronotum with expanded, elevated lobes at each lateral angle, armed with four or five acute processes of similar size; head with prominent, multispinose tubercle behind each eye. (California).....*balli* n. sp.
 - cc. Pronotal angles not expanded, armed with one large tooth preceded by several smaller ones; head with tubercles behind eye smooth or slightly muricate. (United States, east of the Rocky Mountains).....*antennator* Fabr.
- bb. Lateral margins of pronotum unarmed in front of humeral spine; first antennal segment armed with acute tubercles at base only (or none); subtropical or tropical species.
 - c. Body castaneous, margins and angles of pronotum darker; dilation of third antennal segment not notched; venter refescent; dorsum of abdomen rosaceous; spines of pronotum remarkably long and slender. (Texas to Panama).
cuspidatus Dist.
 - cc. Body testaceous, pronotal margins concolorous with or paler than disc; dilation of third antennal segment notched; venter with black spots.
 - d. Dorsum of abdomen black. (Mexico).....*moestus* Burm.
 - dd. Dorsum of abdomen subsanguineous, base and apex black. (South America).....*armatus* Thunbg.

***Chariesterus balli* new species.** (See Figure).

Head quadrate, armed on the disc with two longitudinal rows of two or three vertical spines each; prominent multispinose tubercles caudodorsad of each eye; antenniferous tubercles spinose at both obtuse lateral and acute mesal angles. Antennæ with first segment

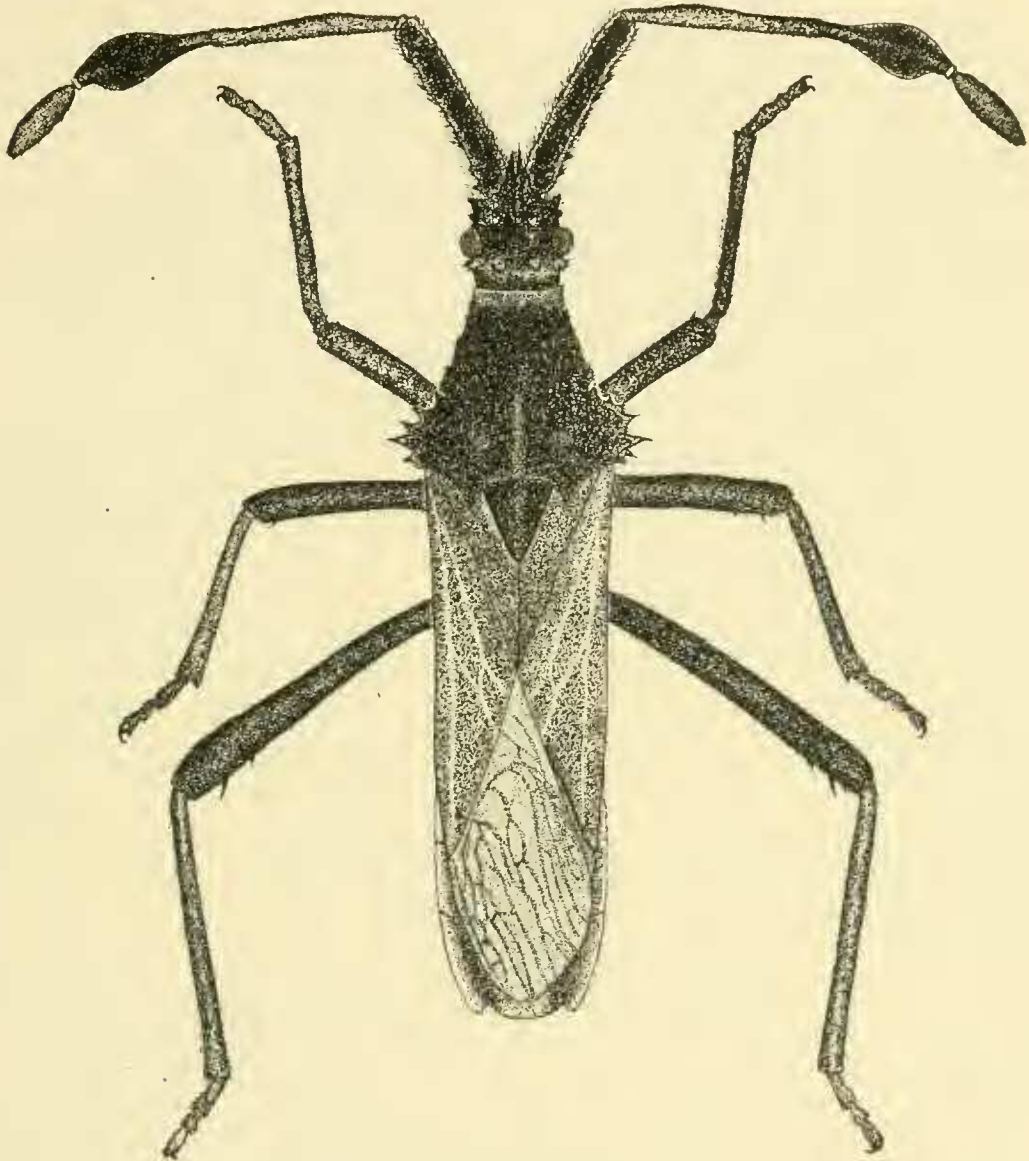


Fig. 1. *Chariesterus balli* n. sp.

strongly triquetrous, lateral carinæ with basal two-thirds armed with numerous acute tubercles, mesal carinæ unarmed except at base; second segment much more slender, shorter, compressed and slightly expanded near the middle; third segment longer than fourth, strongly expanded throughout three-fourths of the length, four-tenths as wide as long. Rostrum scarcely attaining posterior coxæ.

Pronotum more elongate than in *C. antennator*, with each lateral angle elevated, expanded, irregularly armed with three to five large subequal teeth, anterior and posterior lateral margins with several smaller teeth; posterior angles each with flat triangular tooth. Scutellum unarmed. Mesosternum and metasternum, in part, deeply sulcate. Posterior tibiæ shorter than femora. All femora armed with short spines near the apex.

Color black, marked with dark ferrugineous. Head black above, ferrugineous beneath, with a rufescent vitta below each eye, rugose; antenniferous tubercles wide, adjacent, black. Antennæ black, immaculate, except that second segment is ferrugineous; rostrum scarcely attaining posterior coxæ.

Pronotum and scutellum black, pubescent, and very rugose, former with narrow, scarcely perceptible median line paler and slightly sulcate. Corium ferrugineous. Membrane sooty black. Venter and legs dusky ferrugineous.

Cotypes: Two males, captured at Cabazon, California, by Dr. E. D. Ball, and now in his collection.

In the presence of spinose callosities behind the eyes, this species approaches *Plapigus*, while the parallel sided basal antennal segments and the shape of the pronotum indicate *Chariesterus* as the proper genus.

C. antennator is the only species which is likely to be confused with *balli* as all the others possess a single long spine at the humeral angles. The species here described is more slender than *antennator*, a deeper black in color, and with the lateral angles of the pronotum expanded and elevated and armed with four or five large teeth. The tubercle behind the eye is more prominently spinose than in any other species of the genus.